



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
REGION 5  
77 WEST JACKSON BOULEVARD  
CHICAGO, IL 60604-3590

MAR 04 2015

REPLY TO THE ATTENTION OF:

**CERTIFIED MAIL**  
**RETURN RECEIPT REQUESTED**

Anoop Balakrishnan  
Environmental Engineer  
Harrison Steel Castings Company  
900 North Mound Street  
Attica, Indiana 47918

Dear Mr. Balakrishnan:

The U.S. Environmental Protection Agency is issuing the enclosed Notice and Finding of Violation (NOV/FOV) to Harrison Steel Castings Company's facility at 900 North Mound Street, Attica, Indiana (you or the facility). EPA has determined that the facility is in violation of the National Emission Standard for Hazardous Air Pollutants for Iron and Steel Foundries, the facility's Title V Permit, and the Indiana State Implementation Plan (SIP). Violations of the National Emission Standard for Hazardous Air Pollutants for Iron and Steel Foundries constitute violations of Section 112 of the Act. Violations of a Title V Permit and the Indiana SIP constitute violations of Section 111 of the Act.

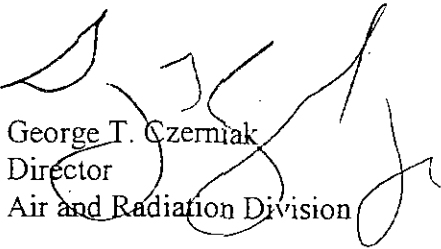
Section 113 of the Clean Air Act gives us several enforcement options. These options include issuing an administrative compliance order, issuing an administrative penalty order and bringing a judicial civil or criminal action.

We are offering you an opportunity to confer with us about the violations alleged in the NOV/FOV. The conference will give you an opportunity to present information on the specific findings of violation, any efforts you have taken to comply and the steps you will take to prevent future violations. In addition, in order to make the conference more productive, we encourage you to submit to us information responsive to the NOV/FOV prior to the conference date.

Please plan for the facility's technical and management personnel to attend the conference to discuss compliance measures and commitments. You may have an attorney represent you at this conference.

Please contact Alexandra Letuchy, Environmental Engineer, at (312) 886-0557, if you wish to request a conference. You should make the request for a conference within 10 calendar days following receipt of this letter. We should hold any conference within 30 calendar days following receipt of this letter.

Sincerely,



George T. Czerniak  
Director  
Air and Radiation Division

cc: Phil Perry, Indiana Department of Environmental Management

Enclosure

**UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
REGION 5**

**IN THE MATTER OF:**

**Harrison Steel Castings Company  
Attica, Indiana**

Proceedings Pursuant to  
the Clean Air Act  
42 U.S.C. § 7401 *et seq.*

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)  
) **NOTICE AND FINDING OF  
VIOLATION**  
)  
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**EPA-5-15-IN-03**

**NOTICE AND FINDING OF VIOLATION**

Harrison Steel Castings Company owns and operates a steel foundry at 900 North Mound Street, Attica, Indiana (facility). Operations at the facility include three electric arc furnaces and their associated air pollution control devices.

The U.S. Environmental Protection Agency is sending this Notice and Finding of Violation (NOV/FOV or Notice) to notify the facility that we have found violations of the General Provisions to the National Emission Standard for Hazardous Air Pollutants (NESHAP), the NESHAP for Iron and Steel Foundries (NESHAP for Iron and Steel Foundries), the facility's Title V permit, and regulations in the Indiana State Implementation Plan.

**Clean Air Act**

1. Section 112(b) of the Clean Air Act (CAA), 42 U.S.C. § 7412(b) lists 188 Hazardous Air Pollutants (HAPs) that cause adverse health or environmental effects.

2. Section 112(d) of the CAA, 42 U.S.C. § 7412(d), requires EPA to promulgate regulations establishing emissions standards for each category or subcategory of major and area sources of HAPs that are listed for regulation pursuant to Section 112(c), 42 U.S.C. § 7412(c).

**NESHAP General Provisions**

3. 40 C.F.R. § 63.7(e)(1) states that "[p]erformance tests shall be conducted under such conditions as the Administrator specifies to the owner or operator based on representative performance (i.e., performance based on normal operating conditions) of the affected source."

## **NESHAP for Iron and Steel Foundries**

4. Under Section 112(d) of the Act, 42 U.S.C. § 7412(d), EPA promulgated the NESHAP for Iron and Steel Foundries, effective April 22, 2004. See 69 Fed. Reg. 21923. The NESHAP for Iron and Steel Foundries is codified at 40 C.F.R. Part 63, Subpart EEEEE.

5. 40 C.F.R. § 63.7681 provides that the owner or operator of an iron and steel foundry is subject to this subpart if it owns or operates a major source of hazardous air pollutant (HAP) emissions (or is a part of) a major source of HAP and has the potential to emit in excess of 10 tons per year of an individual HAP and 25 tons per year of all HAPs combined.

6. 40 C.F.R. § 63.7682(a) provides that “[t]he affected source is each new or existing iron and steel foundry.”

7. 40 C.F.R. § 63.7682(c) provides that “[a]n affected source is existing if you commenced construction or reconstruction of the affected source before December 23, 2002.”

8. 40 C.F.R. § 63.7683(a) provides that “[e]xcept as specified in paragraph (b) of this section, if you have an existing affected source, you must comply with each emissions limitation, work practice standard, and operation and maintenance requirement in this subpart that applies to you no later than April 23, 2007. Major source status for existing affected sources must be determined no later than April 23, 2007.”

9. 40 C.F.R. § 63.7690(a)(7) provides that “[f]or each building or structure housing any iron and steel foundry emissions source at the iron and steel foundry, you must not discharge any fugitive emission to the atmosphere from foundry operations that exhibit opacity greater than 20 percent (6-minute average), except for one 6-minute average per hour that does not exceed 27 percent opacity.”

10. 40 C.F.R. § 63.7690(a)(4) provides that “[f]or each electric arc metal melting furnace, electric induction metal melting furnace, or scrap preheater at an existing iron and steel foundry, you must not discharge emissions through a conveyance to the atmosphere that exceed either the limit for particulate matter (PM) in paragraph (a)(1)(i) of this section or, alternatively the limit for total metal HAP in paragraph (a)(1)(ii) of this section: (i) 0.005 grains of PM per dry standard cubic foot (gr/dscf), or (ii) 0.0004 gr/dscf of total metal HAP.”

11. 40 C.F.R. § 63.7710(b) provides that “[y]ou must prepare and operate at all times according to a written operation and maintenance plan for each capture and collection system and control device for an emissions source subject to a PM, metal HAP, TEA, or VOHAP emissions limit in § 63.7690(a). [...]”

12. 40 C.F.R. § 63.7731(a) provides that “[y]ou must conduct subsequent performance tests [following an initial performance test] to demonstrate compliance with all applicable PM or total metal HAP [...] emissions limitations in § 63.7690 for your iron and steel foundry no less frequently than every 5 years and each time you elect to change an operating limit or to comply with a different alternative emissions limit, if applicable. [...]”

13. 40 C.F.R. § 63.7736 provides that:

“(a) For each capture system subject to an operating limit in § 63.7690(b); you have demonstrated initial compliance if you have met the conditions in paragraphs (a)(1) and (2) of this section.

(1) You have certified in your notification of compliance status that:

(i) You have submitted the capture system operation and maintenance plan to the Administrator for approval according to the requirements of § 63.7710(b); and

(ii) You will inspect, operate, and maintain each capture system according to the procedures in the plan.

(2) You have certified in your performance test report that the system operated during the test at the operating limits established in your operation and maintenance plan.

(b) For each control device subject to an operating limit in § 63.7690(b), you have demonstrated initial compliance if you have certified in your notification of compliance status that:

(1) You have submitted the control device operation and maintenance plan to the Administrator for approval according to the requirements of § 63.7710(b); and

(2) You will inspect, operate, and maintain each control device according to the procedures in the plan.

(c) For each bag leak detection system, you have demonstrated initial compliance if you have certified in your notification of compliance status that:

(1) You have submitted the bag leak detection system monitoring information to the Administrator within the written O&M plan for approval according to the requirements of § 63.7710(b);

(2) You will inspect, operate, and maintain each bag leak detection system according to the procedures in the plan; and

(3) You will follow the corrective action procedures for bag leak detection system alarms according to the requirements in the plan. [...]”

14. 40 C.F.R. § 63.7740(b) provides that “[f]or each negative pressure baghouse or positive pressure baghouse equipped with a stack that is applied to meet any PM or total metal HAP emissions limitation in this subpart, you must at all times monitor the relative change in PM loadings using a bag leak detection system according to the requirements in § 63.7741(b).”

15. 40 C.F.R. § 63.7750(a) provides that “[y]ou must submit all of the notifications required by §§ 63.6(h)(4) and (5), 63.7(b) and (c); 63.8(e); 63.8(f)(4) and (6); 63.9(b) through (h) that apply to you by the specified dates.”

16. 40 C.F.R. § 63.7750(e) provides that “[i]f you are required to conduct a performance test or other initial compliance demonstration, you must submit a notification of compliance status according to the requirements of § 63.9(h)(2)(ii). For opacity performance tests, the notification of compliance status may be submitted with the semiannual compliance report in § 63.7751(a) and (b) or the semiannual part 70 monitoring report in § 63.7551(d).”

### **Title V Permit**

17. Title V of the CAA, 42 U.S.C. §§ 7661-7661f, established an operating permit program for major sources of air pollution. Section 502(d)(1) of the CAA, 42 U.S.C. § 7661a(d)(1), requires each state to develop and submit to EPA an operating permit program which meets the requirements of Title V. Pursuant to Appendix A of 40 C.F.R. Part 70, on December 4, 2001, EPA granted Indiana final approval of its Title V CAA Permit Program, effective November 30, 2001. 66 Fed. Reg. 62969.

18. 40 C.F.R. § 70.2 defines “major source” as, among other things, any stationary source that directly emits, or has the potential to emit: (i) 10 tons per year or more of any hazardous air pollutant listed pursuant to CAA Section 112(b); (ii) 25 tons or more of any combination of hazardous air pollutants; and/or (iii) 100 tons per year or more of any other air pollutant subject to regulation under the CAA.

19. Indiana’s Title V operating permit program regulations are codified at 326 IAC 2-7, and are federally enforceable pursuant to Section 113(a)(3) of the CAA, 42 U.S.C. § 7413(a)(3).

20. 40 C.F.R. § 70.6(b)(1) provides that Title V permits are federally enforceable and that all terms and conditions in a Title V permit are enforceable by the EPA.

### **Harrison Steel’s Title V Permits**

21. The Indiana Department of Environmental Management (IDEM) issued a modified Part 70 Operating Permit, No. T045-22716-00002 to the Facility on October 15, 2009. (2009 Title V Permit)

22. IDEM issued a modified Part 70 Operating Permit, No. T045-31297-00002 to the Facility on February 27, 2012. (February 2012 Title V Permit)

23. IDEM issued a modified Part 70 Operating Permit, No. T045-31317-00002 to the Facility on March 15, 2012. (March 2012 Title V Permit)

24. IDEM issued a modified Part 70 Operating Permit, No. T045-32267-00002 to the Facility on February 19, 2013. (2013 Title V Permit)

25. Condition D.1.4 of the 2009 Title V Permit and the February 2012 Title V Permit states that before August 15, 2012, the Permittee shall perform PM and PM10 testing for baghouse DC40 controlling the electric arc furnace EAF4 using methods as approved by the Commissioner, in order to demonstrate compliance with Condition D.1.2. These tests shall be repeated at least once every five (5) years from the date of a valid compliance demonstration. Testing shall be conducted in accordance with Section C - Performance Testing.

26. Condition C.8. of the 2009 Title V Permit and the February 2012 Title V Permit states that all testing shall be performed according to the provisions of 326 IAC 3-6 (Source Sampling Procedures).

27. Condition D.7.3.(a) of the February 2012, March 2012, and 2013 Title V Permit states that at least 99% of all particulate matter (PM and PM10) emissions generated during sand handling, mechanical reclaim, and thermal reclaim operations shall be captured by a baghouse and controlled.

28. Condition D.7.3(b) of the February 2012, March 2012, and 2013 Title V Permit states that at least 96% of all particulate matter (PM and PM10) emissions generated during the shakeout operations shall be captured by a baghouse and controlled.

29. Condition D.10.6(a) of the February 2012, March 2012, and 2013 Title V Permit states that visible emission notations of a thermal sand reclaimer baghouse stack exhaust (stack DC48) shall be performed once per day during normal daylight operations. A trained employee shall record whether emissions are normal or abnormal.

30. Condition D.10.7(a) of the February 2012, March 2012, and 2013 Title V states that the Permittee shall maintain daily records of the visible emission notations of the thermal sand reclaimer exhaust stacks. The Permittee shall include in its daily record when a visible emission notation is not taken and the reason for the lack of a visible emission notation, (e.g. the process did not operate that day).

### **Indiana State Implementation Plan**

31. 326 Indiana Administrative Code (IAC) 3-6 states that the owner or operator of a source or emissions unit shall conduct all emission tests as under conditions of worst case emissions, and if the worst case emission condition is not known, then the worst case emission condition shall be assumed to be the maximum process or operating rate of the emissions unit as listed in the permit's emissions unit description.

### **Factual Background**

32. Harrison Steel Castings Company (Harrison Steel) owns and operates a steel foundry at 900 North Mound Street, Attica, Indiana (the facility). The facility operate three electric arc furnaces (EAF2, EAF3, and EAF4) and a thermal sand reclaimer.

33. The facility is a major source of HAPs because it has the potential to emit in excess of 10 tons per year of an individual HAP and 25 tons per year of all HAPs combined, thus making it an affected source under the NESHAP for Iron and Steel Foundries.

34. EPA conducted an inspection of the Facility on June 5, 2013.

35. EPA issued to Harrison Steel an information request under Section 114 of the CAA on December 9, 2013. Harrison Steel submitted a response on March 31, 2014.

36. Baghouse DC4 controls emissions from EAF2, Baghouse DC5 controls emissions from EAF3, and Baghouse DC40 controls emissions from EAF4. Baghouses DC42 and DC38 control emissions from the melt shop that include emissions from EAF2, EAF3, and EAF4.

#### NESHAP for Iron and Steel Foundries

##### *Evidence Supporting that Harrison Steel Did Not Demonstrate Compliance with the PM Emission Limit and the Building Opacity Limit by Not Testing Under Representative Conditions*

37. On August 13 – 15, 2007, Air Test Professionals, Inc. conducted an emissions test to determine the particulate matter emission rate, metal emissions, and opacity from EAF2, EAF3, and EAF4 and summarized the results of the test in a report (2007 Performance Test Report). According to the 2007 Performance Test Report, emissions (particulate matter and metals) were not sampled at DC42 and DC38.

38. According to the process data provided in the 2007 Performance Test Report, raw materials were charged to the furnace several minutes prior to each test run; therefore, emissions during charging were not measured during the particulate matter and metals emissions tests or during the opacity observations.

39. On June 25 – 27, 2012, Air Test Professionals, Inc. conducted an emissions test to determine the particulate matter emission rate, metal emissions, and opacity from EAF2, EAF3, and EAF4 and summarized the results of the test in a report (2012 Performance Test Report). According to the 2012 Performance Test Report, emissions (particulate matter and metals) were not sampled at DC42 and DC38.

40. According to the process data provided in the 2012 Performance Test Report, raw materials were charged to the furnace several minutes prior to each test run; therefore, emissions during charging were not measured during the particulate matter and metals emissions tests or during the opacity observations.

##### *Evidence Supporting that Harrison Steel Did Not Prepare an Operation and Maintenance Plan for DC38 and DC42*

41. In response to the information request, Harrison Steel did not provide an operation and maintenance plan for DC38 and DC42.

##### *Evidence Supporting that Harrison Steel Did Not Install Bag Leak Detection System at DC38 and DC42*



42. In response to the information request, Harrison Steel did not provide information indicating that bag leak detection systems have been installed and operated on DC38 and DC42.

*Evidence Supporting that Harrison Steel Provided an Incomplete Notification of Compliance Status*

43. Harrison Steel's Notification of Compliance Status Report, signed April 13, 2005 did not include items required under 40 C.F.R. § 63.7736 related to the operation and maintenance plan and bag leak detection system.

Title V Permit

*Evidence Supporting that Harrison Steel Did Not Achieve the Required Capture and Control Efficiency at Airset Shakeout, Sand Handling, Mechanical Reclaim, and Thermal Reclaimer*

44. The air emission statement certification for 2012, signed June 20, 2013 states the total control efficiencies for PM and PM10 emissions from the following airset molding line emission units:

	PM	PM10
Airset Shakeout	98%	90%
Airset Sand Handling	90%	90%
Airset Mechanical Reclaim	98%	90%
Airset Thermal Reclaimer	98%	98%

*Evidence Supporting that Harrison Steel Did Not Perform Visible Emission Readings at North Thermal Sand Reclaimer (DC48)*

45. Harrison Steel's Visible Emissions – Parametric Monitoring records demonstrate that daily visible emission readings at the thermal sand reclaimer (DC48) were not performed or recorded until May 2013.

*Evidence Supporting that Harrison Steel Did Not Demonstrate Compliance with PM emission limit at EAF4*

46. During the 2007 and 2012 Performance Test, raw materials were charged to EAF4 prior to each run. Emissions during charging were not measured during the particulate matter emissions tests.

Violations

NESHAP for Iron and Steel Foundries

*Failure to Demonstrate Compliance with the PM Emission Limit and Building Opacity Limit by Not Testing Under Representative Conditions*

47. By failing to conduct particulate matter emissions testing at DC42 and DC38, Harrison Steel violated the performance testing requirement at 40 C.F.R. § 63.7731(a) and failed to demonstrate compliance with the emission limit at § 63.7690(b).

48. By failing to conduct particulate matter or metals testing and opacity observations during charging at the EAFs, Harrison Steel failed to conduct a performance test under representative conditions as required by 40 C.F.R. § 63.7(e)(1), demonstrate compliance with the emission limit at § 63.7690(b), and the opacity limit at § 63.7690(a)(7).

*Failure to Prepare Operation and Maintenance Plan for DC38 and DC42*

49. By failing to prepare an operation and maintenance plan for DC38 and DC42, Harrison Steel violated the operation and maintenance requirements at 40 C.F.R. § 63.7710(b).

*Failure to Install Bag Leak Detection System at DC38 and DC42*

50. By failing to install a bag leak detection system at DC38 and DC42, Harrison Steel violated the monitoring requirements at 40 C.F.R. § 63.7740(b).

*Incomplete Notification of Compliance Status*

51. By failing to submit a complete Notification of Compliance Status, Harrison Steel violated the requirements to demonstrate initial compliance with operation and maintenance at 40 C.F.R. § 63.7736.

Title V Permit

*Failure to Achieve Capture and Control Efficiency at Airset Shakeout, Sand Handling, Mechanical Reclaim, and Thermal Reclaimer*

52. By failing to maintain 99% capture and control of all particulate matter emissions generated during airset sand handling, mechanical reclaim, and thermal reclaim operations, Harrison Steel violated Conditions D.7.3(a) of the February 2012, March 2012, and 2013 Title V.

53. By failing to maintain 99% capture and control of all particulate matter emissions generated during airset sand shakeout operations, Harrison Steel violated Conditions D.7.3(b) of the February 2012, March 2012, and 2013 Title V.

*Failure to Perform Visible Emission Readings at North Thermal Sand Reclaimer (DC48)*

54. By failing to perform daily visible emission readings at the North Thermal Sand Reclaimer, Harrison Steel's violated monitoring requirements at Condition D.10.6(a) and recordkeeping requirements at Condition D.10.7(a) of the February 2012, March 2012, and 2013 Title V.

*Failure to Demonstrate Compliance with PM Emission Limit at EAF4*

55. By failing to conduct particulate matter (PM/PM10) emissions testing during charging at the EAF4, Harrison Steel failed to conduct a performance test under conditions of worst case emissions as required by D.1.4 (by reference, 326 IAC 3-6-3 Section 3.(b)(1)(B)) and failed to demonstrate compliance with the emission limits at D.1.2.(a) - (b) of the 2009 Title V Permit.

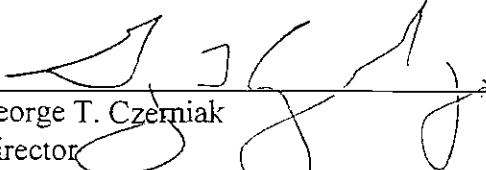
#### **Environmental Impact of Violations**

56. These violations have caused or can cause excess emissions of PM. PM, especially fine particulates contains microscopic solids or liquid droplets, which can get deep into the lungs and cause serious health problems. PM exposure contributes to:

- irritation of the airways, coughing, and difficulty breathing;
- decreased lung function;
- aggravated asthma;
- chronic bronchitis;
- irregular heartbeat;
- nonfatal heart attacks; and
- premature death in people with heart or lung disease.

Date

3/4/15

  
George T. Czerniak  
Director  
Air and Radiation Division

## CERTIFICATE OF MAILING

I, Loretta Shaffer, certify that I sent a Notice and Finding of Violation, No. EPA-5-15-IN-03, by Certified Mail, Return Receipt Requested, to:

Anoop Balakrishnan  
Environmental Engineer  
Harrison Steel Castings Company  
900 North Mound Street  
Attica, Indiana 47918

I also certify that I sent a copy of the Notice and Finding of Violation by first-class mail to:

Phil Perry, Chief  
Air Compliance and Enforcement Branch  
Indiana Department of Environmental Management  
100 N. Senate Ave.  
Mail Code 61-53 IGCN 1003  
Indianapolis, IN 46204-2251

On the 5<sup>th</sup> day of March 2015.

CERTIFIED MAIL RECEIPT NUMBER: 7011 1150 0000 2640 6219

Loretta Shaffer  
Loretta Shaffer, Program Technician  
AECAB, PAS